

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A piston ring for use with a piston made of an aluminum alloy in an internal combustion engine, comprising a coating film comprising a heat-resistant resin binder material and a solid lubricant dispersed therein on at least one side surface, said heat-resistant resin binder material comprising at least one of a polyamideimide-silicon dioxide hybrid material and a polyimide-silicon dioxide hybrid material.

2. (Original) The piston ring according to claim 1, wherein said solid lubricant comprises an inorganic compound, an inorganic simple substance or a fluororesin, and has an average particle size of 0.1 μm to 20 μm .

3. (Original) The piston ring according to claim 2, wherein said solid lubricant comprises at least one selected from the group consisting of molybdenum disulfide, tungsten disulfide, boron nitride, graphite, polytetrafluoroethylene resins and tetrafluoroethylene-perfluoroalkyl vinyl ether copolymer resins.

4. (Previously Presented) The piston ring according to claim 1, wherein the content of said solid lubricant in the entire coating is 5 to 80% by mass.

5. (Previously Presented) The piston ring according to claim 1, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

6. (New) The piston ring according to claim 2, wherein the content of said solid lubricant in the entire coating is 5 to 80% by mass.

7. (New) The piston ring according to claim 3, wherein the content of said solid lubricant in the entire coating is 5 to 80% by mass.

8. (New) The piston ring according to claim 2, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

9. (New) The piston ring according to claim 3, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

10. (New) The piston ring according to claim 4, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

11. (New) The piston ring according to claim 6, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

12. (New) The piston ring according to claim 7, wherein said piston ring comprises a nitrided layer formed on a surface of a substrate thereof, said nitrided layer having a thickness of 3 μm to 120 μm .

13. (New) The piston ring of claim 1, wherein the content of said solid lubricant in the entire coating is 30-70% by mass.

14. (New) The piston ring according to claim 1 wherein said polyamideimide-silicon dioxide hybrid material is a heat treated graft product of an alkoxysilane onto a polyamideimide having a carboxyl group or an acid anhydride group at an end thereof.

15. (New) The piston ring of claim 1 wherein said polyamideimide-silicon dioxide hybrid material is a heat

treated graft product of methoxysilane grafted onto side chains of a polyamic acid composed of pyromellitic acid and oxadiazaniline.

16. (New) The piston ring of claim 1 wherein said heat-resistant resin binder material is a silane-modified polyamideimide resin and/or a silane-modified polyimide resin which is a reaction product of (1) a partial condensation product of a glycidyl ether group-containing alkoxysilane prepared by a dealcoholization reaction product between a partial condensation product of tetramethoxysilane and a glycide or glycidol, and (2) a polyamideimide and/or a polyamide having a carboxyl group and/or an acid anhydride group at an end thereof.

17. (New) The piston ring according to claim 1 wherein said heat-resistant resin binder material is a heat-treated silane-modified resin which is a reaction product of polyamideimide and/or polyamide with a partial condensation product of glycidyl ether group-containing alkoxysilane.

18. (New) The piston ring of claim 1 wherein the silicon dioxide portion of said heat-resistant resin binder material comprises 0.2 to 30% by mass.